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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,786	02/24/2004	Hasan Nejad	M4065.0509/P509 B	2218

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EXAMINER
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NGUYEN, VIET Q

ART UNIT	PAPER NUMBER
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2827

DATE MAILED: 04/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

ER

<b>Office Action Summary</b>	<b>Application No.</b> 10/784,786	<b>Applicant(s)</b> NEJAD ET AL.	
	<b>Examiner</b> Viet Q. Nguyen	<b>Art Unit</b> 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on Election filed on 2/24/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 62-73 is/are pending in the application.
- 4a) Of the above claim(s) 70-73 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 62-69 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/24/2004</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

The applicant's election of Group 1, claims **62-69** is acknowledged.

Claims **62-69** are present for examination.

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims **62-69** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Seyyedy et al (6,754,124)**.

**Seyyedy et al (se Fig. 1)** teaches a memory device comprising a plurality of slices (or layers, planes, etc.) of **MRAM** cells (38). Fig.2 also shows that each such slice or layer also comprising an array of such cells arranged in rows and columns (44, 39) and having an associated access transistor (16), see col. 2-4.

Regarding the claimed steps of a method for reading such memory cells,

Seyyedy et al teaches the following:

- Fig. 2, both row decoder (81) and column decoder (82) are used to perform the "decoding an address associated with a selected cell in a particular slice/plane by determining the a row address and a layer address of particular slice;

- Col. 5 (lines 24-43) mentions the use of a read/write common line where reading/writing voltage can be applied for selecting an associated address;
- Col. 5 (lines 24-43) mentions the use of sense amplifier for sensing a logic state of selected cell at such associated address by activating the access transistor;
- Col. 5 (lines 24-43) mentions the sensing step performed by determining the resistance level of such selected memory cell;
- Col. 5 (lines 24-43) mentions the reading step performed by determining the X-axis direction and Y-Z plane direction through decodes (81, 82) as claimed.

Regarding claims 71-73, col. 6 (lines 20-29) mentions the use of line (31a, Fig. 3) as a reference line for holding a reference voltage level so that the resistance of selected cell can be compared using the sense amp (50).

Regarding the claimed "sense interconnect line", col. 5 (lines 9-15) mentions the sense line interconnected (32), which is itself electrically connected to the access transistor (16).

It is noted that Seyyedy et al patent discloses the use of "MRAM" type cell which uses "magneto-resistance" instead of pure "resistance" for representing a logic state of the memory cell (as claimed by the instant application). However, it is the examiner's position that Seyyedy et al concept can be similarly applied for any other type of memory devices that contains "resistance" value. The reason is

because Seyyedy et al (see particular col. 7-8) also mentions that "... ***while the invention has been described within the context of memory devices employing MRAM cells, other types of memory cells such as programmable conductor RAM (PCRAM) cells may also be used with the present invention.***" Thus, because PCRAM is well-known in the art as a type of ***"resistive" memory where the conductor material has its resistance varied according to program voltage and/or logic state of the memory cell***, one having ordinary skilled in the art can see that PCRAM or any other similar resistive memory cell type could have been obviously employed in the same structure of Seyyedy, without departing form the spirit of his invention.

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Viet Q. Nguyen whose telephone number is (571) 272-1788. The examiner can normally be reached on 7am-6pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoai Ho can be reached on (571) 272-1777. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2827

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



V. Nguyen  
4/15/2005

Viet Q Nguyen  
Primary Examiner  
Art Unit 2827

